

Abstract

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Human enzymes from dehydrogenase/reductase SDR family (DHRS) include 17 members that belong to the large short-chain dehydrogenase/reductase superfamily. The short-chain dehydrogenase/reductase superfamily contains 80 human members, some of them are important and well described enzymes such as 11 β -hydroxysteroid dehydrogenase, carbonyl reductase 1 and 17 β -hydroxysteroid dehydrogenase. However there are many poorly described or undescribed members of this superfamily, including group DHRS. There is just a little information about proteins DHRS1, DHRS12, DHRS13, DHRS4L1, DHRS4L2. Proteins DHRS2, DHRS4, DHRS6, DHRS7, DHRS7B, DHRS7C, DHRS8, DHRS9, DHRS10, DHRS11 and DHRSX are better described because at least subcellular localization and substrate (except DHRSX) is known, and therefore an initial opinion on their possible function can be formed. The DHRS3 is the only one enzyme of group DHRS that has been tested *in vivo*. DHRS3 could play a significant role in fetal development. For DHRS3, but also for the other DHRS enzymes, first knowledge of their connection with some diseases, primarily with cancer. For this reason it was necessary to summarize current, fragmented knowledge that may help to direct further research in this area.